(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
23 October 2003 (23.10.2003)

PCT

(10) International Publication Number
WO 03/088552 A1

(51) International Patent Classification[7]: H04L 1/06

(21) International Application Number: PCT/SE03/00458

(22) International Filing Date: 19 March 2003 (19.03.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0201103-9 11 April 2002 (11.04.2002) SE

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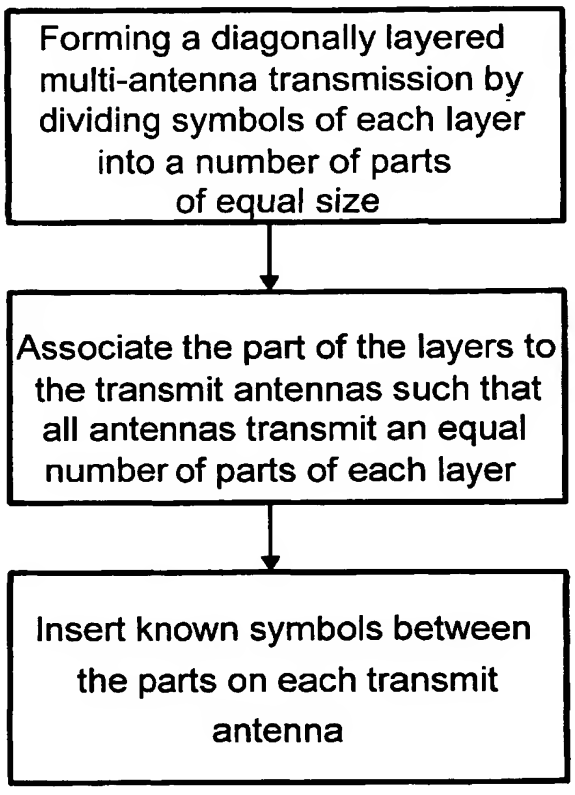
(81) Designated States *(national)*: AE, AG, AL, AM, AT (utility model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (utility model), DE, DK (utility model), DK, DM, DZ, EC, EE (utility model), EE, ES, FI (utility model), FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK (utility model), SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

[Continued on next page]

(54) Title: DIAGONALLY LAYERED MULTI-ANTENNA TRANSMISSION FOR FREQUENCY SELECTIVE CHANNELS



(57) Abstract: A method and a system are disclosed for avoiding inter-layer inter-symbol interference. Diagonally layered multi-antenna transmissions are utilised by the proposed method and system. Known symbols are inserted at the borders between different layers to avoid inter-layer inter-symbol interference. The system relies on an improved method to transmit multiple data-streams (layers). The invention describes a method for transmitting data-streams over multiple antennas in an effective and smart way when having frequency selective channels. By utilising a system using the present method problems with inter-layer inter-symbol interference between different data-streams can be avoided when changing transmit antenna for the data-streams. The invention utilises that a diagonal layered multi-antenna transmission will not create inter-symbol interference, ISI, between different layers.

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